

the same division of the body as those preceding it. It may even be taken as a rule that all the *lower* Crustaceans (Xiphura, Branchiopoda, Ostracoda, Copepoda, and Cirripedia) have typically *two* pairs of foot-jaws, never more, while the Malacostraca have either *three* pairs or only *one* pair,—and, further, that the former have only *one* pair of maxillæ, while the Decapoda and other Malacostraca have generally *two* pairs.

“Thus in order to obtain at the same time a uniform and practically useful terminology for the class Crustacea, it seems to me advisable to abolish in that group the utterly meaningless divisions *thorax* and *abdomen*, and to adopt those which I have now put forward, viz. *head*, *trunk*, and *tail*.”]

LVII.—*A List of Spiders captured in the South-east Region of Equatorial Africa; with Descriptions of such Species as appear to be new to Arachnologists.* By JOHN BLACKWALL, F.L.S.

MY friend Mr. Meade having transmitted to me for examination a second collection of spiders, made in the south-east region of equatorial Africa by the late Mr. Richard Thornton and Mr. Horace Waller, the result of my investigation of the specimens contained in it is given in the following list.

Tribe Octonoculina.

Family LYCOSIDÆ.

Genus CTENUS, Walck.

Ctenus vagus, n. sp.

Length of the female $1\frac{1}{4}$ inch; length of the cephalothorax $\frac{2}{3}$, breadth $\frac{1}{2}$; breadth of the abdomen $\frac{2}{3}$; length of an anterior leg $2\frac{1}{6}$; length of a leg of the third pair $1\frac{1}{2}$.

The eyes are disposed on the anterior part of the cephalothorax in three transverse rows; the two anterior ones, with the two intermediate ones of the four constituting the second row, describe a trapezoid whose shortest side is before; and each of the two eyes forming the posterior row; with a lateral one of the second row, is seated on a tubercle; the intermediate eyes of the second row are the largest, and the lateral ones, which are in a line with them, much the smallest of the eight. The cephalothorax is compressed before, truncated in front, rounded on the sides, which are depressed and marked with furrows converging towards a narrow indentation in the medial line of the posterior region; it is clothed with short brownish-yellow hairs, and is of a dark reddish-brown colour, with narrow, brown lateral margins. The falcæ are powerful, conical, vertical, and

armed with teeth on the inner surface; the maxillæ are straight, enlarged at the extremity, which is rounded on the outer side and obliquely truncated on the inner side, where it is supplied with long hairs; the lip is short, broad, and somewhat quadrate, but rounded on the sides; the sternum has a broad oval form, with small eminences on the sides, opposite to the legs. These parts are of a dark-brown colour, the falces, which are much the darkest, being supplied with red hairs at the base, in front. The legs are long, robust, provided with brownish-yellow hairs and strong sessile spines, and are of a red-brown colour; the first pair is the longest, then the fourth, and the third pair is the shortest; the metatarsi and tarsi have brown hair-like papillæ on their inferior surface, and the latter are terminated by two curved claws, pectinated at their base. The palpi are long, and rather lighter-coloured than the legs, with the exception of the digital joint, which has a brown hue. The abdomen is oviform, densely covered with brownish-yellow hairs, convex above, and projects a little over the base of the cephalothorax; a series of broad, curved, angular lines of a brown colour, having their convex sides towards each other and their vertices directed forwards, extends along the middle of the upper part; and on each side of it there is a row of four depressed dark-brown spots: the sexual organs, which are well developed, and of a red-brown colour, have a large process directed backwards from their anterior margin, whose extremity is dilated.

This large *Ctenus* was the only individual of the species included in the collection.

Genus SPHASUS, Walck.

Sphasus pulchellus, n. sp.

Length of the female $\frac{1}{2}$ of an inch; length of the cephalothorax $\frac{3}{10}$, breadth $\frac{3}{20}$; breadth of the abdomen $\frac{5}{4}$; length of an anterior leg $\frac{5}{8}$; length of a leg of the third pair $\frac{9}{10}$.

The abdomen is oviform, somewhat pointed at the spinners, very convex above, and projects over the base of the cephalothorax; it is clothed with adpressed hairs, and is of a red-brown colour mingled with yellowish white; the under part, which is of a yellowish-white hue, has a dark-brown band extending along the middle; the sexual organs are moderately developed, with a longitudinal septum in the middle; they are of a dark red-brown colour, the posterior margin being much the palest, and that of the branchial opercula is brown. The eyes are disposed on the anterior part of the cephalothorax, high above the frontal margin; the four posterior ones form a greatly curved transverse row, whose convexity is directed upwards and somewhat backwards, and the other four describe a trapezoid whose

shortest side is before; the posterior eyes of the trapezoid are the largest, and the anterior ones are much the smallest of the eight. The cephalothorax is slightly compressed before, truncated in front, rounded on the sides, convex, glossy, with a slight indentation in the medial line; it is of a brown colour tinged with red, and has an irregular dark-brown band on each side, and a spot of the same hue behind the medial indentation; the space comprised between the posterior eyes of the trapezoid and those of the transverse curved row, and a spot on each exterior angle of the frontal margin, are of a dark-brown colour; the lateral margins and the front are provided with yellowish-white hairs, and some of a pale-red hue occur on the abruptly sloped base. The falces are powerful, subconical, vertical, supplied with dull-yellowish hairs in front, and armed with one or two minute teeth on the inner surface; the maxillæ are long, obliquely truncated at the extremity, on the outer side, and slightly inclined towards the lip, which is broader towards the extremity than at the base, and truncated at the apex; the sternum is heart-shaped, and clothed with short yellowish-white hairs intermixed with long ones of a darker hue. These parts are of a brown colour tinged with red. The legs are slender, provided with hairs and long spines, and are of a pale-brown hue, with a few annuli of a deeper shade; the first pair is the longest, then the second, and the third pair is the shortest; each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base. The palpi, which are without annuli, resemble the legs in colour, and have a curved, pectinated claw at their extremity.

A single specimen of this species was included in the collection.

Family CINIFLONIDÆ.

Genus ORITHYIA, Blackw.

Orithyia Williamsii.

Orithyia Williamsii, Blackw. Ann. & Mag. Nat. Hist. ser. 3. vol. ii. p. 331, and vol. viii. p. 443.

The collection contained three females of this species. Both sexes of *Orithyia Williamsii* have been received from Pernambuco.

Genus ERESUS, Walck.

Eresus africanus, n. sp.

Length of the female $\frac{1}{2}$ of an inch; length of the cephalothorax $\frac{5}{16}$, breadth $\frac{1}{5}$; breadth of the abdomen $\frac{5}{16}$; length of an anterior leg $\frac{3}{8}$; length of a leg of the third pair $\frac{3}{8}$.

The eyes are disposed on the anterior part of the cephalothorax;

a large quadrilateral figure, formed by the four exterior ones, whose anterior side is the longest, includes a small trapezoid described by the four intermediate ones; the posterior eyes of the trapezoid are the widest apart and the largest of the eight, and the anterior ones, each of which is seated on a small tubercle, form with the anterior eyes of the quadrilateral figure a transverse row in front. The cephalothorax is large, very convex in the cephalic region, depressed behind, clothed with brownish-yellow hairs, and of a red-brown colour, the lateral margins being the palest. The falces are short, powerful, cuneiform, vertical, densely covered with reddish-yellow hairs at the base, in front, and of a red-brown colour, the extremity being much the darkest. The maxillæ are straight, enlarged at the extremity, which is rounded on the outer side and somewhat produced on the inner side; the lip is triangular, and the sternum is oval. These parts have a pale red-brown hue. The legs are moderately long, robust, clothed with hairs, and are of a yellowish-brown colour, the under part of the femora and tibiæ of the first and second pairs having a dark-brown hue; the first pair is the longest, then the fourth, and the third pair is the shortest; each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base, where there are several minute teeth; the metatarsus of each posterior leg is provided with a calamistrum. The palpi, which are short, resemble the legs in colour, and have a curved, pectinated claw at their extremity. The abdomen is oviform, convex above, projecting over the base of the cephalothorax; it is clothed with brownish-yellow hairs, and is of a yellowish-brown colour, the under part being much the brownest; four dark-brown depressions, connected by a sinuous line of the same hue, extend along each side of the medial line of the upper part: the sexual organs are moderately developed, and of a red-brown colour; the spinners are eight in number; those of the inferior pair, which are the shortest, consist of a single joint each, and are united throughout their entire length.

An adult and an immature female of *Eresus africanus* were included in the collection. This species is provided with eight spinners and calamistra; and I am informed by the Rev. O. P. Cambridge that Dr. Ludwig Koch, of Nürnberg, has observed that some other species of the genus are similarly organized. Should all of them be found to be provided with these parts, the entire genus should be comprised in the family *Ciniflonidæ*; but if they are possessed only by a portion of the species, a new genus, founded on such species, should be transferred to that family.

Family SALTICIDÆ.

Genus SALTICUS, Latr.

Salticus cornutus, n. sp.

Length of the female (not including the spinners) $\frac{1}{3}$ of an inch; length of the cephalothorax $\frac{3}{10}$, breadth $\frac{1}{8}$; breadth of the abdomen $\frac{1}{8}$; length of a leg of the third pair $\frac{7}{4}$; length of a leg of the second pair $\frac{5}{4}$.

The cephalothorax is somewhat quadrate, but rounded on the sides; it is convex and glossy, but slopes abruptly at the base, and gradually to the front, which projects a little beyond the mandibles; it has a small indentation near the middle, and is provided with a few scattered black hairs, eight, longer than the rest and closely grouped, having the appearance of a slightly curved horn, situated near the minute intermediate eye of each lateral row on its outer side; the falces are short, subconical, and vertical; the maxillæ are straight, and enlarged and rounded at the extremity; the lip and sternum are oval, the latter being broader at its posterior than at its anterior extremity; the legs are robust, particularly those of the first and second pairs, and are provided with hairs and spines, two parallel rows of the latter occurring on the inferior surface of the tibiæ and metatarsi of the first and second pairs; the third pair is the longest, then the fourth, and the second pair is the shortest; each tarsus is terminated by two curved, slightly pectinated claws, below which there is a small scopula; the palpi are slender, and are supplied with numerous whitish hairs, especially on the digital joint. These parts are of a yellowish-brown colour, the sternum and palpi being the palest. The eyes are nearly encircled by short, coarse, white hairs; the lateral eyes are seated on tubercles placed on dark reddish-brown patches, the minute one of each row being nearer to the anterior than to the posterior eye of the same row. The abdomen is oviform, pointed at the spinners (which are prominent), densely clothed with hairs, moderately convex above, and projects over the base of the cephalothorax; the upper part is of a brownish-yellow colour tinged with red on its margins, the posterior margin forming a curve above the spinners whose convexity is directed forwards; a line composed of minute black spots borders each lateral margin of the upper part, and a band of the same hue, which is supplied with white hairs having a silvery lustre, extends along the middle; this band increases in breadth to its extremity, which is crescent-shaped; the sides and under part have a pale dull-yellow hue; the former are clothed with white hairs, and have a broad, irregular, brownish-black band extending along each, whose continuity is interrupted at its posterior extremity; a

short fine line in the middle of the under part, a rhomboidal spot near its extremity, and the superior pair of spinners have a dark-brown hue: the sexual organs are well developed, have a dull pale-yellow septum in the middle, and are of a red-brown colour.

Two females of this remarkable *Salticus* were comprised in the collection, one of which was adult, and the other immature. It appears to have a near relation of affinity to the *Attus bos* of Sundevall, 'Conspectus Arachnidum,' p. 27.

Family THOMISIDÆ.

Genus THOMISUS, Walck.

Thomisus candidus, n. sp.

Length of the female $\frac{7}{10}$ of an inch; length of the cephalothorax $\frac{1}{6}$, breadth $\frac{1}{7}$; breadth of the abdomen $\frac{3}{10}$; length of a leg of the second pair $\frac{7}{10}$; length of a leg of the third pair $\frac{3}{10}$.

The abdomen is broad, oviform, somewhat pointed at the spinners, corrugated on the sides, glossy, convex above, projecting over the base of the cephalothorax, and has a white hue; a transverse line in front of the upper part, two transverse sinuous lines situated above the spinners, the anterior one being the longer, two spots on each side of the medial line, describing a large quadrilateral figure, whose shortest side is formed by the anterior pair, which are much the smallest, two spots on each side of the posterior extremity, the coccyx, and the upper surface of the two superior spinners are of a dark red-brown colour: the sexual organs, which are not highly developed, have a red-brown hue; and a row of minute, indented, pale-brown spots, on each side of the medial line of the under part, extends to the spinners, where the two meet. The eyes are disposed on the anterior part of the cephalothorax in two transverse, slightly curved rows, forming a crescent whose convexity is directed forwards; the eyes of each lateral pair are seated on white tubercles united at their base, the anterior one being the largest, and the two intermediate ones of the posterior row the smallest of the eight. The cephalothorax is slightly compressed before, truncated in front, rounded on the sides, very convex near the middle, depressed at the base, gradually sloped to the front, and glossy; the falcæ are strong, cuneiform, and vertical; the maxillæ are enlarged where the palpi are inserted, obliquely truncated at the extremity, on the outer side, and inclined towards the lip, which is triangular, but rounded at its apex; the sternum is heart-shaped; the legs are provided with a few spines; the first and second pairs are longer and more robust than the third and fourth pairs, the second pair rather surpass-

ing the first, and the third pair is the shortest; each tarsus is terminated by two curved, pectinated claws; the palpi are short, and have a curved, pectinated claw at their extremity. The colour of these parts is pale dull-yellow, the sternum being the palest; there is a minute brown spot near the base of the falces, in front, and their extremity is whitish; two small black spots occur on the under side of the femora of the first pair of legs, one near the base and the other near the extremity, and there is a black transverse streak, which does not form an annulus, at the extremity of the genual, tibial, and metatarsal joints of each leg.

Only one specimen of this pretty *Thomisus* was included in the collection.

Genus *OLIOS*, Walck.

Olios leucosius.

Olios leucosius, Walck. Hist. Nat. des Insect. Apt. tom. i. p. 566.

Thomisus venatorius, Latr. Gen. Crust. et Insect. tom. i. p. 114.

Numerous specimens of both sexes of this species, in various stages of growth, were comprised in the collection.

Genus *SPARASSUS*, Walck.

Sparassus abnormis, n. sp.

Length of an immature female $\frac{5}{16}$ of an inch; length of the cephalothorax $\frac{1}{8}$, breadth $\frac{1}{8}$; breadth of the abdomen $\frac{3}{16}$; length of a leg of the second pair $\frac{5}{8}$; length of a leg of the third pair $\frac{3}{8}$.

The legs are slender, provided with hairs and long spines, and are of a brownish-yellow hue; there are two minute black spots on the upper surface of the tibiæ, three on the metatarsi of the first and second pairs, and two on the metatarsi of the third and fourth pairs; the second pair is the longest, then the first, and the third pair is the shortest; each tarsus is terminated by a *single* slender, curved, pectinated claw, below which there is a small scopula. The eyes are seated on black spots, and are disposed on the anterior part of the cephalothorax in two transverse rows; the four anterior ones, which are the largest, form a straight row, situated near the frontal margin, and the other four constitute the posterior row, which is rather the longer and slightly curved, having its convexity directed backwards. The cephalothorax is compressed before, truncated in front, greatly rounded on the sides, convex in the middle, sloped to each extremity, with a narrow longitudinal indentation in the medial line of the posterior region, and is of a yellow-brown colour, the lateral margins being much the palest. The falces are powerful, conical, vertical, and armed with teeth on

the inner surface; the maxillæ are short, straight, and rounded at the extremity; the palpi are robust, and terminated by a fine minutely pectinated claw; the lip is semicircular; and the sternum is heart-shaped. These parts are of a yellowish-white colour, the base of the lip being tinged with brown, and the sternum with green. The abdomen is oviform, convex above, and projects over the base of the cephalothorax; it is of a pale-yellow colour, reticulated with pale brown, the under part being the least distinctly marked, and has a ramified band of a brown hue extending from the anterior extremity of the upper part about half its length.

This *Sparassus*, the only specimen of the genus in the collection, is especially remarkable for having only a *single claw* at the extremity of each tarsus.

Family THERIDIIDÆ.

Genus THERIDION, Walck.

Theridion trahax, n. sp.

Length of the female $\frac{3}{10}$ of an inch; length of the cephalothorax $\frac{1}{12}$, breadth $\frac{1}{12}$; breadth of the abdomen $\frac{1}{10}$; length of an anterior leg $\frac{1}{2}$; length of a leg of the third pair $\frac{3}{10}$.

The eyes are disposed on the anterior part of the cephalothorax in two transverse rows, high above the frontal margin; the four intermediate ones nearly form a square, the two anterior ones (which are placed on a slight protuberance, and are rather nearer to each other than the two posterior ones) being the darkest-coloured of the eight; the eyes of each lateral pair are seated on a tubercle, and are contiguous. The cephalothorax is compressed before, rounded on the sides, convex, glossy, with an indentation in the medial line of the posterior region; the falces are conical and vertical; the maxillæ are obliquely truncated at the extremity, on the outer side, and inclined towards the lip, which is semicircular; the sternum is heart-shaped, pointed at its posterior extremity, and has small eminences on the sides, opposite to the legs; the legs are long, and provided with hairs; the first pair is the longest, then the fourth, and the third pair is the shortest; each tarsus is terminated by three claws; the two superior ones are curved and pectinated, and the inferior one is inflected near its base; the palpi are short, and have a curved, pectinated claw at their extremity. These parts are of a brownish-red colour; the extremity and inner margin of the maxillæ and the apex of the lip have a yellowish-white hue, and the digital joint of the palpi is tinged with brown. The abdomen is oviform, clothed with longish scattered hairs, convex above, and projects over the base of the cephalothorax;

it is of a dull-brown colour, the sides and under part being the palest, and has two irregular yellowish-white spots on each side of its posterior half, and three others of the same hue disposed in a longitudinal row above the spinners: the sexual organs are well developed, rather prominent, and of a dark reddish-brown colour, that of the spinners being pale brown.

The only specimen of this species comprised in the collection was an adult female.

Genus PHOLCUS, Walck.

Pholcus pallidus.

Pholcus pallidus, Blackw. Ann. & Mag. Nat. Hist. ser. 3. vol. i. p. 433, and vol. viii. p. 444.

A single female of this species was included in the collection. Both sexes of *Pholcus pallidus* have been received from Pernambuco.

Genus ARTEMA, Walck.

Artema convexa.

Artema convexa, Blackw., Ann. & Mag. Nat. Hist. ser. 3. vol. ii. p. 332.

Length of the female $\frac{3}{8}$ of an inch; length of the cephalothorax $\frac{1}{6}$, breadth $\frac{1}{6}$; breadth of the abdomen $\frac{1}{6}$; length of an anterior leg $2\frac{5}{10}$; length of a leg of the third pair $1\frac{7}{10}$.

The sexes are similar in colour; but the male, though the smaller, has longer legs, an anterior one measuring $2\frac{7}{10}$ inches. The falces are short and irregular in figure, being hollowed on the inner side, and having a strongly arched, tuberculated, dark-brown ridge in front, which terminates in a point; below the ridge they are of a brownish-red hue, and their extremity is armed with a short, slightly curved fang, and a single, pointed tooth on the inner surface. The palpi are glossy, very robust, and their prevailing colour is brownish-yellow, the axillary joint, the base and extremity of the humeral joint, the remarkably short cubital joint, the inferior surface and extremity of the radial joint, and the entire digital joint having a dark-brown hue tinged with red; the axillary joint is short, and produced at its extremity, on the under side; the humeral joint is greatly dilated, convex on the upper side, with a pointed protuberance at its base, on the outer side; the radial joint is nearly hemispherical; and the digital joint is small, with a large apophysis on its outer side of a dark-brown colour tinged with red; this apophysis has a prominent process near its base, on the upper side, and its broad, somewhat depressed extremity is irregular in form; the palpal organs, which are connected with the inferior surface of the digital joint, are subglobose, glossy, of a brownish-yellow hue, and project from their outer side a large curved

process having a short pointed spine in contact with its base, on the inner side, and have a strong obtuse process in front; these processes and the spine are of a dark-brown colour tinged with red.

The large brown-black spots in the medial line of the upper part of the abdomen of both sexes are commonly bisected, and form two distinct longitudinal rows.

Adult and immature females and an adult and immature male of this species were comprised in the collection. Adult females and an immature male of *Artema convexa* have been received from Pernambuco. On a comparison of the dimensions of females from Africa and South America, the African specimens will be found to be somewhat the larger, and to have longer legs.

Family LINYPHIIDÆ.

Genus LINYPHIA, Latr.

Linyphia lepida, n. sp.

Length of an immature female $\frac{1}{10}$ of an inch; length of the cephalothorax $\frac{1}{10}$, breadth $\frac{1}{4}$; breadth of the abdomen $\frac{1}{10}$; length of an anterior leg $\frac{1}{4}$; length of a leg of the third pair $\frac{1}{8}$.

The cephalothorax is slightly compressed before, rounded in front and on the sides, convex, glossy, with an indentation in the medial line of the posterior region; it is of a brownish-yellow colour, with a broad brown band extending from each lateral pair of eyes nearly to its base. The eyes, which are seated on black spots, are disposed on the anterior part of the cephalothorax in two transverse rows; the four intermediate ones form a square, the two anterior ones being rather the largest of the eight; and those of each lateral pair are placed obliquely on a small tubercle, and are near to each other, but not in contact. The falces are conical, vertical, armed with a few teeth on the inner surface, and of a brownish-yellow hue, the extremity being the darkest. The maxillæ are somewhat quadrate, having the exterior angle, at the extremity, curvilinear; the lip is semi-circular, and slightly pointed at the apex; and the sternum is heart-shaped. These parts are of a dark-brown colour, the extremity and inner margin of the maxillæ, the apex of the lip, and a broad band in the middle of the sternum, which is pointed at its posterior extremity, having a brownish-yellow hue. The legs are long, slender, and of a pale-yellow colour, the extremity of each joint being tinged with brown; the first pair is the longest, then the second, and the third pair is the shortest; each tarsus is terminated by three claws; the two superior ones are curved and slightly pectinated, and the inferior one is inflected near its base. The palpi are short, rather paler than the

legs, and the digital joint, which is tinged with brown, has a slender, slightly curved claw at its extremity. The abdomen is somewhat oviform, the posterior part, which is rather the broadest, sloping abruptly downwards at its extremity; it is moderately convex above, projects over the base of the cephalothorax, and is of a yellowish-white colour, faintly reticulated with brown; a dark-brown spot, which comprises a small yellowish-white one, occurs near the middle of the upper part, and is succeeded by two curved lines, which meet in an angle whose vertex is directed backwards; the abruptly sloped posterior extremity is of a brownish-black colour, with a series of minute yellowish-white spots on each side of the medial line; a brownish-black spot occurs on the anterior part of each side, and is followed by oblique curved lines, of a browner hue, whose lower extremities are enlarged and more or less confluent; a broad, deeply indented, brownish-black band, bordered with white, extends along the middle of the under part, and the branchial opercula and spinners have a dark-brown hue.

An immature female of this *Linyphia* was the only specimen of the species contained in the collection.

Family EPEIRIDÆ.

Genus EPEIRA, Walck.

Epeira solers.

Epeira solers, Walck. Hist. Nat. des Insect. Apt. tom. ii. p. 41; Blackw.

Spiders of Great Britain and Ireland, part ii. p. 336, pl. 24. fig. 243.

— *agalena*, Hahn, Die Arachn. Band ii. p. 29, tab. 47. fig. 115.

Atea scolopetaria, Koch, Uebers. des Arachn. Syst. erstes Heft, p. 4; Koch, Die Arachn. Band xi. p. 134, tab. 390. figs. 934, 935.

All the specimens of *Epeira solers* contained in the collection were females, and were larger and darker-coloured than those which are indigenous to Britain.

Epeira decens, n. sp.

Length of an immature male $\frac{3}{16}$ of an inch; length of the cephalothorax $\frac{1}{12}$, breadth $\frac{1}{16}$; breadth of the abdomen $\frac{1}{4}$; length of an anterior leg $\frac{7}{24}$; length of a leg of the third pair $\frac{1}{6}$.

The abdomen is oviform, moderately convex above, and projects over the base of the cephalothorax; a yellowish-white band, that tapers to its extremity, and is bisected longitudinally by an obscure yellowish-brown band, extends along the middle of the upper part, and comprises a fine, black, angular line, whose vertex is directed forwards, situated about a third of its length from the coccyx; on each side of this band there is a broad, parallel, brownish-olive band, whose exterior margin is sinuous,

each convex curve of the sinuosity including a black spot; the sides have a yellowish-white hue, their lower part being densely marked with pale-brown streaks and spots; the under part is of a dull-yellow colour, and comprises three longitudinal dark-brown bands, which meet at the spinners. The eyes are seated on black spots, and are disposed on the anterior part of the cephalothorax in two transverse rows; the four intermediate ones describe a trapezoid, the two anterior ones, which are placed on a protuberance, and are much wider apart than the posterior ones, being the largest of the eight; the eyes of each lateral pair are seated obliquely on a minute tubercle, and are near to each other, but not in contact. The cephalothorax is compressed before, rounded in front and on the sides, convex, glossy, with an indentation in the medial line of the posterior region; it is of a yellowish-brown colour, the cephalic region being much the palest, and has a narrow brown band extending along the middle. The falces are conical, vertical, armed with teeth on the inner surface, and have a pale brownish-yellow hue. The maxillæ are straight, and rounded at the extremity; and the lip is semicircular, but slightly pointed at the apex. These organs are of a brown colour at the base, that of their extremities being pale yellow. The sternum is heart-shaped, with eminences on the sides, opposite to the legs, and has a dark-brown hue tinged with red. The legs are moderately long, sparingly provided with hairs, and of a dull brownish-yellow colour; the first pair is the longest, then the second, and the third pair is the shortest; the tarsi are terminated by claws of the usual number and structure. The palpi are short, and paler than the legs. The very tumid digital joint of this specimen indicates that it had to undergo its final ecdysis before it arrived at maturity.

The immature male described above was the only individual of this species comprised in the collection.

Epeïra dorsuosa, n. sp.

Length of the female $\frac{1}{2}$ an inch; length of the cephalothorax $\frac{1}{5}$, breadth $\frac{1}{6}$; breadth of the abdomen $\frac{1}{4}$; length of an anterior leg $\frac{7}{10}$; length of a leg of the third pair $\frac{2}{5}$.

The eyes are disposed on the anterior part of the cephalothorax in two transverse rows; the four intermediate ones, which are the largest, are seated on a prominence, and nearly form a square; and the eyes of each lateral pair are placed obliquely on a tubercle, and are separated by a moderately wide interval. The cephalothorax is compressed before, rounded in front and on the sides, convex, clothed with hoary hairs, and has an indentation in the medial line of the posterior region; it is of a yellowish-brown colour, with a longitudinal dark-brown band in the middle, which is broadest in the cephalic region, and anothe

of the same hue parallel to each lateral margin. The falces are powerful, conical, vertical, armed with teeth on the inner surface, and are of a yellow-brown colour tinged with red at the extremity. The maxillæ are short, straight, and broadly rounded at the extremity; and the lip is semicircular, but somewhat pointed at the apex. These parts are of a dark-brown colour, that of their extremities being yellowish-white. The sternum is heart-shaped, pointed at the extremity, and has prominences on the sides, opposite to the legs; it is clothed with hoary hairs, and has a yellowish-brown hue, the medial line being the palest. The legs are robust, provided with hairs and spines, and are of a brown colour, with annuli of a darker hue; the first pair is the longest, then the second, and the third pair is the shortest; the tarsi are terminated by claws of the usual number and structure. The palpi resemble the legs in colour, and have a curved, pectinated claw at their extremity. The figure of the abdomen is somewhat quadrilateral, but the sides are rounded, and the anterior is broader than the posterior extremity; it is clothed with short hairs, projects over the base of the cephalothorax, and has two prominent tubercles on each side, and two large, parallel, obtuse ones situated above the spinners; the upper part, on which there are numerous circular glossy convexities, of various dimensions, in bas-relief, is of a yellowish-brown colour, an obscure, strongly dentated, yellowish-white line passing from each anterior tubercle to the two obtuse posterior tubercles; the lower part of each side is strongly tinged with dull yellow, and the under part has a dark-brown hue mingled with dull yellow, and a curved yellow band on each side: the sexual organs are well developed, and of a dark-brown hue tinged with red; their anterior margin is semicircular, and below it there are two glossy protuberances placed transversely; the branchial opercula are of a pale brown colour, and on each side of the spinners there are three dark-brown triangular spots, which are united at their bases.

Three females of *Epeïra dorsuosa*, two of which were adult and the other immature, were comprised in the collection. This species differs from the *Epeïra opuntia* of Dufour (see Walckenaer's 'Hist. Nat. des Insect. Apt.' tom. ii. p. 140), to which it is closely allied, in various particulars, and may readily be distinguished from it by the glossy convexities on the upper part of its abdomen.

Genus GASTERACANTHA, Latr.

Gasteracantha frontata.

Gasteracantha frontata, Blackw. Ann. & Mag. Nat. Hist. ser. 3. vol. xiv. p. 40.

The collection contained two females of this species, specimens

of which, of a somewhat smaller size, have been received from India.

The numerous instances of the distribution of spiders of the same species over extensive and widely distant regions of the globe may be explained by their having been conveyed across intervening oceans in ships and by the action of currents of air, especially of those known as the trade-winds and monsoons, on the silken filaments emitted from their spinners.

Genus ARGYOPES, Savigny.

Argyopes gracilis, n. sp.?

Length of an immature female $\frac{3}{8}$ of an inch; length of the cephalothorax $\frac{1}{6}$, breadth $\frac{1}{8}$; breadth of the abdomen $\frac{1}{5}$; length of an anterior leg $\frac{4}{5}$; length of a leg of the third pair $\frac{5}{8}$.

The abdomen is of an elongated slender figure; its anterior extremity, which has the appearance of having been cut directly across, has a minute tubercle on each side, and projects over the base of the cephalothorax; the posterior extremity, which almost tapers to a point, extends greatly beyond the spinners, and has a small protuberance on each side; the upper part is of a yellowish-white colour, with a dark-brown crescent-shaped mark at its anterior extremity, whose convexity is directed upwards, and spots and irregular streaks of the same hue on each side of the medial line, the latter being most conspicuous on its posterior half; three strong, conical, yellowish-white prominences, marked in front with a curved, oblique, dark-brown line that passes over their summit, project from each side, and below them there are numerous irregular longitudinal lines of the same hue; from each minute anterior tubercle a dark-brown line passes below the first lateral prominence; the under part, which is irregularly bordered with white, is of a brownish-black colour, and comprises some small white spots, three of which are disposed in a triangle near the spinners; these latter organs, with the branchial opercula, have a red-brown hue, and the inferior surface of the elongated tail-like extremity is densely freckled with black spots. The eyes are disposed on the anterior part of the cephalothorax in two transverse rows; the four intermediate ones are placed on a protuberance, and nearly form a square; and the eyes of each lateral pair are seated obliquely on a tubercle, and are near to each other, but not in contact, the anterior one being much the smallest of the eight. The cephalothorax is compressed before, rounded in front and on the sides, slightly convex, with a shallow, brown indentation in the medial line of the posterior region; it is of a pale dull-yellow hue, with a broad brown band extending from each side of the cephalic region to the base,

where the two are united by a transverse bar of the same hue; two pale brown spots occur behind the posterior pair of eyes, and the whole is clothed with white hairs having a silvery lustre. The falces are powerful, conical, vertical, armed with teeth on the inner surface, and of a pale dull-yellow colour, with an obscure brown line extending along their inner side, and passing obliquely above their extremity. The maxillæ are short, strong, and greatly enlarged and rounded at the extremity; the lip is semicircular, but somewhat pointed at the apex; and the sternum, which is heart-shaped and hairy, has eminences on the sides, opposite to the legs. These parts are of a dark-brown colour; the extremity of the maxillæ and the apex of the lip have a brownish-yellow hue; and a band extending along the middle of the sternum, from each side of which a streak is directed obliquely backwards and outwards, is of a pale dull-yellow colour. The legs are long, slender, provided with hairs and a few spines, and are of a dark-brown hue, with broad brownish-yellow annuli; the first pair is the longest, then the second, and the third pair is the shortest; the tarsi are terminated by claws of the usual number and structure. The palpi are long, of a pale dull-yellow colour, and have a curved, pectinated claw at their extremity.

Although this spider differs remarkably in form and in some other particulars from *Argyopes caudatus* (see the 'Annals and Mag. of Nat. Hist.' ser. 3. vol. xvi. p. 346), yet it possibly may be an immature individual of that species, to which it bears some striking points of resemblance.

Genus EURYSOMA, Koch.

Eurysoma vicina, n. sp.

Length of the female $1\frac{1}{10}$ inch; length of the cephalothorax $\frac{1}{2}$, breadth $\frac{2}{5}$; breadth of the abdomen $\frac{4}{10}$; length of a posterior leg $1\frac{2}{12}$; length of a leg of the third pair $\frac{1}{2}$.

The eyes are disposed on the anterior part of the cephalothorax in two transverse rows; the four intermediate ones are seated on a protuberance, and form a trapezoid, the two anterior ones, which are nearer to each other than the posterior ones, being the largest of the eight; the eyes of each lateral pair are placed apart on a strong tubercle, and are distant from the four intermediate ones. The cephalothorax is large, compressed before, truncated in front, and rounded on the sides, which are marked with furrows converging towards the middle; the cephalic region, which is greatly elevated above the posterior part, has four conical glossy tubercles disposed in a transverse

row behind the eyes, and is densely clothed with hoary hairs; the falces are short, very powerful, subconical, vertical, and armed with teeth on the inner surface; the maxillæ are short, strong, straight, and greatly enlarged and rounded at the extremity; the lip is semicircular; and the sternum is heart-shaped, with small eminences on the sides, opposite to the legs. These parts are of a brownish-black colour, the base and lateral margins of the cephalothorax being tinged with red. The legs are moderately long and robust, the genua, tibiæ, and metatarsi being somewhat depressed; they have a very dark brown hue, are provided with hoary hairs on the upper surface, and have a patch of white hairs at the base of the tibiæ, and at the base and extremity of the metatarsi on the under side; the fourth pair, which is the longest, very slightly surpasses the first pair, and the third pair is the shortest; the tarsi are terminated by claws of the usual number and structure. The palpi are rather short, somewhat depressed, of a very dark brown hue, provided with hoary hairs intermixed with some of a brownish-red colour on the upper surface, and have a curved, pectinated claw at their extremity. The abdomen is circular, without spines, truncated in front, moderately convex above, and projects greatly over the base of the cephalothorax; the upper part is of a brownish-yellow colour; three conspicuous, depressed, brown spots form a row on each side of the medial line, and numerous smaller depressed spots of the same hue occur in front and on the sides; four conical tubercles form a curved row on each side of the anterior part, the anterior one being much the smallest; three other tubercles form a transverse row between the posterior ones of the two curved rows; two others are placed wide apart on the posterior half, and four more, nearly describing a square, are situated above the spinners; the sides and front are paler than the upper part, and are densely clothed with hoary hairs; the under part has a brown hue, the sexual organs and spinners being the darkest, and the branchial opercula the palest, and there is a transverse pale-buff band immediately behind the sexual organs, which are well developed, with a convex protuberance on each side, and between them a fine, pointed process connected with their anterior margin.

The collection contained a single adult female of this fine *Eurysoma*, which is very closely allied to the *Epeïra imperialis* of Walckenaer, 'Hist. Nat. des Insect. Apt.' tom. ii. p. 147 (*Eurysoma sexcuspidata*, Koch, Uebers. des Arachn. Syst., fünftes Heft, p. 10), but differs from it in various particulars, and especially in the number and disposition of the tubercles on the abdomen.

Genus NEPHILA, Leach.

Nephila geniculata.

Epeira geniculata, Walck. Hist. Nat. des Insect. Apt. tom. ii. p. 96.

Adult and immature females of this handsome *Nephila* were included in the collection.

Genus TETRAGNATHA, Latr.

Tetragnatha festiva, n. sp.

Length of the female $\frac{5}{16}$ of an inch; length of the cephalothorax $\frac{1}{8}$, breadth $\frac{1}{10}$; breadth of the abdomen $\frac{1}{8}$.

The cephalothorax is compressed before, rounded in front and on the sides, slightly convex, glossy, with a large indentation in the medial line of the posterior region; it is of a yellowish-brown colour, with a red-brown band parallel to each lateral margin, and another in the medial line, whose greatly enlarged anterior extremity comprises the whole of the cephalic region. The falcæ are powerful, conical, vertical, very convex in front, glossy, armed with teeth on the inner surface, and have a red hue tinged with brown. The maxillæ are straight, enlarged at the extremity, which is somewhat angular on the outer side, and of a brownish-red colour. The lip is semicircular and prominent at the apex; and the sternum is heart-shaped, with prominences on the sides, opposite to the legs. These parts are of a dark-brown colour tinged with red, the apex of the former and the lateral margins of the latter having a yellowish-red hue. The legs are long, slender, provided with hairs, and of a brown colour, the base of the femora being the palest; their relative length could not be ascertained, as they were detached and mutilated; but, judging from the relative size of the coxæ, the first pair should be the longest, then the second, and the third pair the shortest. The palpi are long, slender, of a brownish-yellow hue, and have a slightly curved, minutely pectinated claw at their extremity. The eyes are seated on black spots on the anterior part of the cephalothorax; the four intermediate ones nearly form a square; the two anterior ones, which are placed on a slight protuberance, are rather nearer to each other than the posterior ones, which are the largest of the eight; the eyes of each lateral pair are seated near to each other on a small tubercle, the posterior one being the smallest. The abdomen is subcylindrical, tapering somewhat to the extremity, which is obtuse, slightly curved upwards, and extends beyond the spinners; and there is an obtuse protuberance on each side of the anterior extremity, which projects over the base of the cephalothorax; the upper part and sides have a silvery lustre, with a slight golden tinge, and on

each side of the medial line there is a red band having a bright golden lustre; in the space between these bands another band extends, that projects from each side three short streaks directed obliquely backwards, and has a small spot on each side, near its posterior extremity; the band, streaks, and spots, with the two anterior protuberances, have a black hue; the under part has a silvery lustre, with a slight golden tinge, and is bounded on each side by two longitudinal dark-brown bands, comprising between them another of a dull-red hue: the sexual organs form a transverse oval; a small process is connected with their posterior margin, and their colour is pale reddish-brown; the branchial opercula have a yellow hue, and that of the spinners is brown.

The collection contained an adult female of this brilliant *Tetragnatha*.

Tribe Senoculina.

Family SCYTODIDÆ.

Genus SCYTODES, Latr.

Scytodes thoracica.

Scytodes thoracica, Walek. Hist. Nat. des Insect. Apt. tom. i. p. 270; Latr. Gen. Crust. et Insect. tom. i. p. 99; Blackw. Spiders of Great Britain and Ireland, part 2. p. 380, pl. 29. fig. 272.

— *tigrina*, Koch, Die Arachn. Band v. p. 87, tab. 167. fig. 398.

One adult female of this species was included in the collection.

LVIII.—*Additional Note on the Antilocapridæ.*

By Dr. J. E. GRAY, F.R.S. &c.

AFTER my notes on this family were written and the manuscript sent to the printer, I heard that Dr. Sc Slater had made some observations on the genus at the British-Association Meeting at Nottingham. The paper is published in the last Number of the Annals. I am very glad to find that Dr. Sc Slater agrees with me in the necessity of forming the genus into a peculiar family.

Dr. Sc Slater has adopted Dr. Sundevall's division of the Ruminants into two groups, according to the form of the foot; but I think his change of Sundevall's term *Digitigrada* into *Phalangigrada* is to be regretted, as adding a useless synonym.

There is no doubt that the form of the *placenta* is an interesting physiological fact; but I doubt its applicability to zoological classification. It is only to be observed at one period of the animal's life, and is only known in a very few species: for example, I am not aware that it is known in *Antilocapra*, the